

7958A Multi-Conductor - Category 5e DataTuff® 600V AWM Rated Twisted Pair Cable



For more Information
please call

1-800-Belden1



General Description:

24 AWG Bonded-Pairs solid bare copper conductors, polyolefin insulation, overall Beldfoil® shield (100% coverage), industrial grade sunlight- and oil-resistant PVC jacket, drain wire, rip cord. Sequential marking at two foot intervals

Usage (Overall)

Suitable Applications:

Industrial Ethernet Cable, Harsh Environments, 200MHz Category 5e, Industrial Ethernet, Gigabit Ethernet, 100BaseTX, 100BaseVG ANYLAN, 155ATM, 622ATM, NTSC/PAL Component or Composite Video, AES/EBU Digital Audio, AES51, RS-422, Noisy Environments, CMX - Outdoor, RJ-45 Compatible*

Physical Characteristics (Overall)

Conductor

AWG:

| # Pairs | AWG | Stranding | Conductor Material |
|---------|-----|-----------|--------------------|
| 4 | 24 | Solid | BC - Bare Copper |

Total Number of Conductors:

8

Insulation

Insulation Material:

| Insulation Material | Wall Thickness (mm) |
|---------------------|---------------------|
| PO - Polyolefin | 0.254 |

Outer Shield

Outer Shield Material:

| Outer Shield Trade Name | Type | Outer Shield Material | Coverage (%) |
|-------------------------|------|------------------------------|--------------|
| Beldfoil® | Tape | Aluminum Foil-Polyester Tape | 100 |

Outer Shield Drain Wire AWG:

| AWG | Stranding | Drain Wire | Conductor Material |
|-----|-----------|--------------------|--------------------|
| 24 | 7x32 | TC - Tinned Copper | |

Outer Jacket

Outer Jacket Material:

| Outer Jacket Material |
|--------------------------|
| PVC - Polyvinyl Chloride |

Outer Jacket Ripcord:

No

Overall Cable

Overall Nominal Diameter:

6.731 mm

Pair

Pair Color Code Chart:

| Number | Color |
|--------|------------------------------|
| 1 | White/Blue Stripe & Blue |
| 2 | White/Orange Stripe & Orange |
| 3 | White/Green Stripe & Green |
| 4 | White/Brown Stripe & Brown |

Mechanical Characteristics (Overall)

| | |
|-----------------------------------|----------------|
| Installation Temperature Range: | -25°C To +75°C |
| Operating Temperature Range: | -40°C To +75°C |
| Bulk Cable Weight: | 47.622 Kg/Km |
| Max. Recommended Pulling Tension: | 155.687 N |
| Min. Bend Radius/Minor Axis: | 12.700 mm |

Applicable Specifications and Agency Compliance (Overall)

Applicable Standards & Environmental Programs

CEC/C(UL) Specification:

CMR

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| | |
|---------------------------------------|-----------------------------------------------------------------------------|
| AWM Specification: | UL Style 21047 |
| EU Directive 2011/65/EU (ROHS II): | Yes |
| Other Standards: | TIA 1005 |
| EU Directive 2000/53/EC (ELV): | Yes |
| EU Directive 2002/95/EC (RoHS): | Yes |
| EU RoHS Compliance Date (mm/dd/yyyy): | 01/01/2004 |
| EU Directive 2002/96/EC (WEEE): | Yes |
| EU Directive 2003/11/EC (BFR): | Yes |
| CA Prop 65 (CJ for Wire & Cable): | Yes |
| MII Order #39 (China RoHS): | Yes |
| Other Specification: | NEMA WC-63.1 Category 5e, UL verified to Category 5e, EtherNet/IP Compliant |

Applicable Patents:

| |
|--------------------------------------------------------|
| Country |
| www.belden.com/p |

Flame Test

| | |
|------------------|--------------|
| UL Flame Test: | UL1666 Riser |
| CSA Flame Test: | FT4 |
| IEEE Flame Test: | 1202 |

Suitability

| | |
|------------------------|-----|
| Suitability - Outdoor: | Yes |
| Sunlight Resistance: | Yes |
| Oil Resistance: | Yes |

Plenum/Non-Plenum

| | |
|---------------|----|
| Plenum (Y/N): | No |
|---------------|----|

Electrical Characteristics (Overall)

Nom. Mutual Capacitance:

| |
|--------------------|
| Capacitance (pF/m) |
| 49.215 |

| | |
|-------------------------------------------|-----|
| Maximum Capacitance Unbalance (pF/100 m): | 150 |
|-------------------------------------------|-----|

Nominal Velocity of Propagation:

| |
|--------|
| VP (%) |
| 70 |

Maximum Delay:

| |
|------------------|
| Delay (ns/100 m) |
| 538 @ 100MHz |

Max. Delay Skew:

| |
|-----------------------|
| Delay Skew (ns/100 m) |
| 45 |

Maximum Conductor DC Resistance:

| |
|------------------------|
| DCR @ 20°C (Ohm/100 m) |
| 9.38 |

Max. Operating Voltage - UL:

| Voltage | Description |
|-----------|---------------------------|
| 300 V RMS | |
| 600 V RMS | Appliance Wiring Material |

Maximum DCR Unbalanced:

| |
|--------------------------|
| DCR Unbalance @ 20°C (%) |
| 3 |

Electrical Characteristics-Premise (Overall)

Premise Cable Electrical Table 1:

| Freq. (MHz) | Max. Attenuation (dB/100 m) | Min. NEXT (dB) | Min. PSNEXT (dB) | Min. ACR (dB) | Min. PSACR (dB) | Min RL (dB) | Min. SRL (dB) |
|-------------|-----------------------------|----------------|------------------|---------------|-----------------|-------------|---------------|
| 1 | 2.000 | 65.3 | 62.3 | 63.0 | 60.0 | 20.000 | 20.0 |
| 4 | 4.100 | 56.3 | 53.3 | 51.0 | 49.0 | 23.600 | 23.6 |
| 8 | 5.800 | 51.8 | 48.8 | 46.0 | 43.0 | 25.400 | 25.4 |
| 10 | 6.500 | 50.3 | 47.3 | 43.0 | 41.0 | 26.000 | 26.0 |

METRIC MEASUREMENT VERSION

7958A Multi-Conductor - Category 5e DataTuff® 600V AWM Rated Twisted Pair Cable

| | | | | | | | |
|-------|--------|------|------|------|------|--------|------|
| 16 | 8.200 | 47.3 | 44.3 | 39.0 | 36.0 | 26.000 | 26.0 |
| 20 | 9.300 | 45.8 | 42.8 | 36.5 | 33.5 | 26.000 | 26.0 |
| 25 | 10.400 | 44.3 | 41.3 | 33.9 | 30.9 | 25.500 | 25.5 |
| 31.25 | 11.700 | 42.9 | 39.9 | 31.0 | 28.0 | 25.000 | 25.0 |
| 62.5 | 17.000 | 38.4 | 35.4 | 22.0 | 19.0 | 23.500 | 23.5 |
| 100 | 22.000 | 35.3 | 32.3 | 14.0 | 11.0 | 22.500 | 22.5 |
| 200 | 32.400 | | 27.8 | | 1.0 | | |

Premise Cable Electrical Table 2:

| Freq. (MHz) | Input (Unfitted) Imp. (Ohms) | Fitted Impedance | Min. ELFEXT (dB) | Min. PSELFEXT (dB) |
|-------------|------------------------------|------------------|------------------|--------------------|
| 1 | 100 ± 15 | 100 ± 15 | 63.8 | 60.8 |
| 4 | 100 ± 15 | 100 ± 15 | 51.7 | 48.7 |
| 8 | 100 ± 15 | 100 ± 15 | 45.7 | 42.7 |
| 10 | 100 ± 15 | 100 ± 15 | 43.8 | 40.8 |
| 16 | 100 ± 15 | 100 ± 15 | 39.7 | 36.7 |
| 20 | 100 ± 15 | 100 ± 15 | 37.7 | 34.7 |
| 25 | 100 ± 15 | 100 ± 15 | 35.8 | 32.8 |
| 31.25 | 100 ± 15 | 100 ± 15 | 33.9 | 30.9 |
| 62.5 | 100 ± 15 | 100 ± 15 | 27.8 | 24.8 |
| 100 | 100 ± 15 | 100 ± 15 | 23.8 | 20.8 |
| 200 | 100 ± 25 | | | 14.7 |

Notes (Overall)

Notes: EtherNet/IP is a trademark of ControlNet International, Ltd. under license by Open DeviceNet Vender Association, Inc. Operating temperatures are subject to length de-rating. Cable passes -40C Cold Bend per UL 1581. *Special RJ45 plug required. See WWW. BELDEN.COM - Tools - Connector Cross Reference. Not intended for 600 V electrical power delivery.

Put Ups and Colors:

| Item # | Putup | Ship Weight | Color | Notes | Item Desc |
|---------------|----------|-------------|-------------|-------|----------------------|
| 7958A 0021000 | 1,000 FT | 37.000 LB | RED | C | 4 PR #24 PP FS FRPVC |
| 7958A 0061000 | 1,000 FT | 37.000 LB | BLUE, LIGHT | C | 4 PR #24 PP FS FRPVC |
| 7958A 0081000 | 1,000 FT | 37.000 LB | GRAY | C | 4 PR #24 PP FS FRPVC |
| 7958A 0101000 | 1,000 FT | 37.000 LB | BLACK | C | 4 PR #24 PP FS FRPVC |
| 7958A 0102000 | 2,000 FT | 68.000 LB | BLACK | | 4 PR #24 PP FS FRPVC |
| 7958A 1NH1000 | 1,000 FT | 37.000 LB | TEAL 1NH | C | 4 PR #24 PP FS FRPVC |

Notes:

C = CRATE REEL PUT-UP.

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